

68. (Canceled)

69. (Canceled)

70. (Canceled)

71. (Canceled)

72. (Previously presented) The method of claim 67 further comprising:

assigning a monetary value to the elements in the target data set, and ordering matched target data elements from the target data set in accordance with closeness in meaning between the search request and the larger set of search terms, wherein the monetary value is based on the closeness in meaning.

REMARKS

Applicants have amended independent claims 16, 17 and 67 to recite various features not disclosed or suggested by the cited references. Support for the amendments to claims 16 and 17 may be found in pages 20-26 of the specification, among other places. Similarly, support for the amendment to claim 67 may be found at pages 20-26 of the specification, among other places. No new matter is added with these amendments. For the reasons described below, the present application is now in condition for allowance and such disposition is earnestly requested.

OBJECTIONS TO CLAIMS 37 AND 58

As pointed out in the Notice of non-responsiveness of June 9, 2004, Applicants had not previously responded to the objections to claims 37 and 58. Those claims have been canceled without prejudice or disclaimer for pursuit in a continuation application. Thus, the objection is now moot.

REJECTION OF CLAIM 61 UNDER 35 U.S.C. § 112, FIRST PARAGRAPH

Claim 61 stands rejected under 35 U.S.C. § 112, first paragraph as allegedly lacking written description in the specification. Applicants have canceled claim 61 without prejudice or disclaimer for pursuit in a continuation application. Thus, this rejection is now moot as well.

REJECTIONS OF CLAIMS 36 AND 57 UNDER 35 U.S.C. § 112, SECOND

PARAGRAPH

Claims 36 and 57 stand rejected under 35 U.S.C. § 112, second paragraph as allegedly being indefinite. Applicants respectfully disagree that there is any indefiniteness. Claims 35 and 56 state that “said set of concepts associated with said data item is predetermined.” Claims 36 and 57 then clarify that they are “selected by a user.” There is no inconsistency in that further detail of claims 36 and 57 to claims 35 and 36, respectively.

For example, in one embodiment of claimed 36 and 57, the predetermined association may be made based on the selection of a user (such as a system administrator). Claims 35 and 56 would also cover a situation in which the predetermined association was based on computer-based rules. Thus, Applicants respectively assert that the rejections of claims 36 and 57 are improper and should be withdrawn.

REJECTIONS BASED ON ALLEGED PRIOR ART

Claims 16-19, 21-24, 27-29, 31-33, 35, 37, 39, 40, 42-45, 48, 50, 52-54, 56 and 58 stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by U.S. Patent No. 5,619,709 to Caid et al. (“Caid”). In addition, claims 20, 25, 28, 30, 34, 36, 38, 40, 46, 47, 49, 51, 55, 57, 59, 60-62, 64, and 65 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over

Caid in view of one or more other references. Claims 67 and 72 are also rejected over Caid in view of Voorhees and as to claim 72, further in view of Eldering.

Although Applicants do not agree with the propriety of these rejections, clarifying amendments to the claims have been made that illustrate differences between the claimed inventions and the references cited by the Office.

Specifically, claim 16 has now been amended to recite “receiving a first input and, based on interpretation of potential meanings, associating that input associated with a first set of concepts from said lexicon, said first input representing a first location in the semantic space; assigning a probability factor for each concept in the first set of concepts for the input received; and ... presenting results of a search conducted on the second set of concepts for data associated with the second set of concepts close in meaning to the input based on the determined semantic distances and probability factors associated with the concept in the first set of concepts.” Caid fails to disclose or suggest this combination of steps. Moreover, the other art applied in the rejections in this Office Action fail to provide any suggestion or motivation to correct for this deficiency in Caid.

Rather, Caid places an input into the lexicon without regard to the fact that an input might have a plurality of meanings that require the input to be associated with a plurality of concepts (e.g., the first set of concepts) in the lexicon. Thus, Caid does not have reason to utilize the steps recited in claim 16 that determines probability factors for the first set of concepts used to assist in determining search results. As a result, Caid also fails to disclosure or suggest determining search results based on proximity in the lexicon and probability of the meaning that determined the proximity.

Claims 17 and thus all of its dependent claims (18-25, 27-62, 64, and 65) are allowable over Caid because claim 17 has also been amended to recite “receiving an input and, based on interpretation of potential meanings, associating that input with a first set of concepts from said lexicon and representing a first location in said semantic space; assigning a probability factor for each concept in the first set of concepts for the input received; ... presenting results of a search conducted on the target data set for target data close in meaning to the input based on the determined semantic distances and probability factors associated with the concept in the first set of concepts.” For at least the same reasons applicable to claim 16, claims 17 and its dependent claims are allowable over Caid.

Finally, claim 67 has been slightly amended to clarify the process performed. As amended, claim 67 now recites “searching a target data set for elements close in meaning to the larger set of search terms based on the determined semantic distances.” As amended, claim 67 is allowable over the proposed combination of Caid and Voorhees.

Moreover, as to the proposed combination of Caid and Voorhees as claim 67 as it was recited, the Office Action acknowledges that Caid fails to disclose a method wherein search terms are expanded to include search terms that are close in meaning to the original search request based on predetermined semantic relationships defined by the lexicon. The Office Action then alleges that it would have been obvious to expand search terms based on closeness of meaning in the search request based on semantic relationships. The Office Action alleges that modifying Caid in view of Voorhees would have been obvious to “ease[] the user’s burden when selecting query words,” citing to the Introduction in Voorhees. Applicants disagree.

The very Introduction in Voorhees indicates that Voorhees is concerned with problems associated with retrieval systems that use word matching as a basis for retrieval. *See* Introduction, page 1, first sentence. In other words, when the retrieval system focuses on retrieving content based on its inclusion of a specific word or combination of words, Voorhees teaches that automatically expanding the words provided by the user provides an advantage to the user. So, if the user put in the word “dog,” the results might include those pages that include the word “dog,” but also those that include the word “dogs” due to semantic expansion of “dog” to “dogs.”

There is no suggestion that such a system would have any applicability to a meaning-based retrieval system such as Caid. Specifically, Caid’s approach to retrieval is to assign documents a meaning through use of a vector and then generating a similar vector from an input query to determine relative connection between the vector of the input query and the vectors of various documents stored to determine if the document’s meaning is related to the input. *See* Caid, col. 2, lines 48-65 and col. 3, lines 8-16. Accordingly, Caid immediately takes an input query and generates a “meaning” rather than focusing on the exact words input. Thus, the reason given by Voorhees for using term expansion is not a problem that Caid recognizes. Moreover, by its Introduction, Voorhees itself is limited to term-based retrieval and not meaning based retrieval. Thus, one of ordinary skill in the art of the present invention very likely would not have even looked to Voorhees. And, even if one did look to Voorhees, one would have been instructed by Voorhees that its expansion was useful only for term-based retrieval systems and not the meaning-based retrieval systems of Caid. Finally, neither Caid or Voorhees provide any suggestion how one might blend all of the various concepts in Voorhees or Caid to yield claim

RESPONSE TO OFFICE ACTION OF JUNE 9, 2004
U.S. PATENT APPLICATION SERIAL NO. 09/493,701
ATTORNEY DOCKET NO. 64557.000013

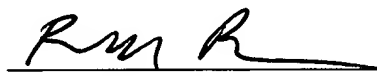
67's invention. Accordingly, claims 67 and 72 are allowable over the art cited in the Office Action.

CONCLUSION

It is respectfully submitted that this application and all pending claims are in condition for allowance and such disposition is earnestly solicited. If the Examiner believes that a telephone conference or interview would advance prosecution of this application in any manner, the undersigned stands ready to conduct such a conference at the convenience of the Examiner.

It is believed that no additional fees are due in connection with filing this amendment. However, the Commissioner is hereby authorized to treat any current or future reply, requiring a petition for an extension of time for its timely submission as incorporating a petition for extension of time for the appropriate length of time. Applicants also authorize the Commissioner to charge any additional fees to the undersigned's Deposit Account No. 50-0206.

Respectfully submitted,



Brian M. Buroker
Registration No. 39,125

Hunton & Williams LLP
1900 K Street, NW
Washington, D.C. 20006-1109
(202) 955-1500

Date: June 24, 2004